

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



Published Online July 2, 2020 https://doi.org/10.1016/ S0140-6736(20)31489-6

For the **Human Cell Atlas** see https://www.humancellatlas.org

For the COVID-19 Information System for the Region of the Americas see https://pahocovid19-response-who.hub. arcois.com/ than in vascular cells or sensory neurons (figure). Although the role of CGRP in promoting peristalsis was known previously,⁵ these new genomic data describe the relative abundance of CGRP receptor expression in enteric neurons (off-target) compared to

neurons (off-target) compared to its putative on-target sites of action in the peripheral nervous system and central nervous system and in neurovasculature. The higher expression of CGRP receptor in enteric neurons raises the possibility that these cells might act as a major site for erenumab binding.⁶

Single-cell gene expression datasets are being generated for most human tissues as part of the Human Cell Atlas, which will provide a valuable resource for predicting off-target drug effects and guiding adverse-event monitoring for new-to-market therapeutics.

WR reports grants from Teva Pharmaceutical Industries and Amgen, outside the submitted work. AV declares no competing interests.

Angeliki Vgontzas, *William Renthal wrenthal@bwh.harvard.edu

Department of Neurology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA 02115, USA

- Sagonowsky E. Amegen's Aimovig, under free from Lilly, loses grip on next-gen migraine share. Sept 4, 2019. https://www. fiercepharma.com/pharma/cgrp-market-raceheats-up-amgen-s-aimovig-slips-under-50lilly-s-emgality-rise (accessed Oct, 13, 2019).
- 2 US Food and Drug Administration. Drug safetyrelated labeling changes. AIMOVIG (BLA-761077). Oct 4, 2019. https://www.accessdata. fda.gov/scripts/cder/safetylabelingchanges/ index.cfm?event=searchdetail. page&DrugNameID=1894 (accessed Oct 4, 2019).
- 3 Goadsby PJ, Reuter U, Hallstrom Y, et al. A controlled trial of erenumab for episodic migraine. N Engl J Med 2017; 377: 2123–32.
- 4 Institute for Safe Medication Practices. QuarterWatch (includes new data from quarter 4, 2018 and quarter 1, 2019) focus on four new drugs: xofluza, aimovig, ajovy, and emgality. Aug 15, 2019. https://www.ismp. org/resources/quarterwatchtm-includes-newdata-quarter-4-2018-and-quarter-1-2019focus-four-new-drugs (accessed Oct 13, 2019).
- Holzer P, Bartho L, Matusak O, Bauer V. Calcitonin gene-related peptide action on intestinal circular muscle. Am J Physiol 1989; 256: 546–52.
- 6 Renthal W, Vgontzas A. Enrichment of migraine susceptibility genes in the enteric nervous system. 60th Annual Scientific Meeting of the American Headache Society; San Francisco; June 28–July 1, 2018 (abstr LB-OR2).

Financial crisis at PAHO in the time of COVID-19: a call for action

On May 21, 2020, at a special session of the Executive Committee of the Pan American Health Organization (PAHO), WHO Regional Office for the Americas, Carissa Etienne, Regional Director, declared that due to non-payment of Member States' contributions, PAHO stands on the brink of insolvency.1 As of April 30, 2020, most of the non-payment is attributable to the USA (67%); however, late payments are outstanding from Brazil, Venezuela, Mexico, Argentina, Colombia, Chile, and others, to a total of US\$164.6 million. This includes an unprecedented \$63.8 million (57%) of 2019 assessed contributions.

This financial crisis could not have occurred at a worse time. The Americas have recorded the greatest COVID-19 morbidity and mortality of any region. As of June 25, 2020, the COVID-19 Information System for the Region of the Americas has recorded 4.6 million cases and 230 400 deaths in 54 countries. The trajectory is worsening.

Health security in the western hemisphere would be severely threatened without a functioning PAHO. Reserve funds will be exhausted by September, 2020. PAHO faces dire actions, including executing borrowing options and possible implementation of key staff furlough measures.

PAHO was established in 1902 to promote public health action against infectious disease threats. A core value was Pan-Americanism, expressed in the countries' commitment to work together to improve the health of populations living in the poorest countries.² With PAHO's leadership, countries of the Americas eliminated polio in 1991, measles in 2002, rubella in 2002, congenital rubella syndrome in 2009, and neonatal tetanus in 2017. PAHO has played crucial roles in responding to numerous other infectious disease threats, controlling the rising tide of non-communicable disease and strengthening health systems.

Leadership and coordination at global and regional levels are pivotal to minimising morbidity and mortality during the COVID-19 pandemic. PAHO must work with all member states to ensure a sustained response to the pandemic and equitable access to vaccine, treatment, and supplies. As health services have been adversely affected by COVID-19, we must anticipate and respond to epidemicprone vaccine-preventable disease outbreaks as well as complications arising from disruption in the management of chronic diseases and cancer.

This is a call to action to countries of the Americas to pay their outstanding contributions and avoid a financial crisis with known and unknown consequences. It is a call for all countries to work together to overcome the challenge of COVID-19 in the spirit of solidarity and protecting the health of all.

AK is Chair of the Regional Certification Commission for the Polio Endgame, Pan American Health Organization (PAHO). JKA is Chair of the Regional Verification Commission for Measles and Rubella Elimination, PAHO. JPF is Chair of the Technical Advisory Group for Vaccine Preventable Diseases, PAHO. We declare no competing interests.

*Arlene King, Jon Kim Andrus, J Peter Figueroa

arlenesking@yahoo.ca

Dalla Lana School of Public Health, University of Toronto, Toronto, ON M5T 3M7, Canada (AK); George Washington University, Washington, DC, USA (JKA); Colorado School of Public Health, Aurora, CO, USA (JKA); and University of the West Indies, Mona, Kingston, Jamaica (JPF)

- 1 Pan American Health Organization. Special session of the Executive Committee. Virtual session, 29 May 2020. Provisional agenda item 3.1. Current financial situation and adjustments to the Pan-American Health Organization strategic priorities. May 29, 2020. https://www.paho.org/hq/index. php?option=com_content&view=article&id=1 5792:special-session-of-the-executivecommittee&Itemid=40453&Iang=en (accessed June 20, 2020).
- Andrus JK, de Quatros C, Ruis Matus C, Luciani S, Hotez P. New vaccines for developing countries: will it be feast or famine? Amer J Law Medicine 2009; 35: 311–22.